

REMARKS/ARGUMENTS

The final Office Action of November 30, 2006, has been carefully reviewed and these remarks are responsive thereto. Claims 23-27 and 29-32 have been amended, and new claims 39-40 have been added. Claims 23-40 are thus pending, and allowance of these claims is respectfully requested.

Rejection under 35 U.S.C. 112

In the final Office Action, claims 23-38 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 23, 24, 25, 26, 31 and 32 have been amended to clarify that the ratios recited are based on respective weights. In view of the foregoing, it is respectfully submitted that the indefiniteness rejection has been rendered moot.

Prior Art Rejections under 35 U.S.C. 103(a)

Claims 23-30, and 33-38 were rejected under 35 U.S.C. 103(a) as being unpatentable over Braun et al. (U.S. Patent No. 4,830,862) in view of combination of Van Ness (U.S. Patent No. 3,245,798) and Nakel et al. (U.S. Patent No. 4,551,342).

Claims 31 and 32 were rejected under 35 U.S.C. 103(a) as being unpatentable over Braun in view of combination of Van Ness and Nakel as applied above further in view of Lee (U.S. Patent No. 5,348,756).

Independent claims 23 and 24 have been amended as follows:

23. (Currently Amended) A method of improving the stability of lemon/lime flavor of a lemon/lime flavored beverage, while also maintaining or increasing the tartness of the lemon/lime beverage, comprising the steps of:

- (a) including in the lemon/lime flavored beverage an acidulant system consisting of
 - (i) citric acid and (ii) adipic acid having a smaller dissociation constant than citric acid;
- and

- (b) including in the lemon/lime flavored beverage a buffer salt system consisting of a citrate salt and a phosphate salt,
wherein the ratio by weight of said adipic acid : said citric acid is 1 : 15 to 1 : 3.

24. (Currently Amended) A method of improving the stability of lemon/lime flavor of a lemon/lime flavored beverage, while also maintaining or increasing the tartness of the lemon/lime beverage, comprising the steps of:

- (a) including in the lemon/lime flavored beverage an acidulant system consisting of
 - (i) a combination of phosphoric acid and citric acid and (ii) adipic acid having a smaller dissociation constant than both phosphoric acid and citric acid; and
- (b) including in the lemon/lime flavored beverage a buffer salt system consisting of a citrate salt and a phosphate salt,
wherein the ratio by weight of said adipic acid : said phosphoric acid : said citric acid is 3.0-4.0 : 1.4-2.0 : 1.0.

As noted in the Background of the present application, while lemon/lime flavor in lemon/lime flavored beverages becomes more stable at higher pHs, the tartness of higher pH beverages is unacceptably compromised. The claimed method provides a solution to this dilemma in the formulation of lemon/lime flavored beverages.

As recognized in the Office Action, Braun "is silent as to the specific amount of adipic acid in a lemon-lime beverage." Braun is also silent on any method to improve the stability of lemon/lime flavor of a lemon/lime flavored beverage, while at the same time maintaining or increasing the tartness of the lemon/lime beverage.

Van Ness and Nakel, like Braun, are also silent on any method to improve the stability of lemon/lime flavor of a lemon/lime flavored beverage, while at the same time maintaining or increasing the tartness of the lemon/lime beverage.

The Office Action contends that one would have been motivated to modify the lemon-lime or cola beverage taught by Braun to contain adipic acid (either in addition to or in place of citric acid as taught by Van Ness) in any ratio desirable while keeping the total acid of the

beverage in the desired range as taught by Nakel “in order to make the beverage concentrate as a free-flowing, easily transportable dry mix with longer shelf-life, as adipic acid is less hygroscopic than other food acids including citric acid and phosphoric acids and it does not absorb moisture from the atmosphere.” This argument ignores the above deficiencies in Braun, Van Ness and Nakel, and ignores that the claimed method is directed to improving the stability of lemon/lime flavor of a lemon/lime flavored **beverage**, while also maintaining or increasing the tartness of the lemon/lime **beverage**. A dry mix is not a beverage. Thus, one of ordinary skill in the art would not have been motivated to practice the method steps of independent claims 23 or 24.

As recognized in the Office Action, the prior art does not teach the exact ratios as claimed. For this additional reason, the pending claims are patentable over the proposed combination of Braun, Van Ness or Nakel. While it may have been known to use the acids claimed in different amounts in a beverage to obtain a desired flavor, there was no known method, prior to the present invention, for improving the stability of lemon/lime flavor of a lemon/lime flavored beverage, while also maintaining or increasing the tartness of the lemon/lime beverage.

The present application provides clear and convincing evidence of patentability of the pending claims. Specifically, the present application provides comparison testing that proves the claimed method improves the stability of lemon/lime flavor of a lemon/lime flavored beverage, while also maintaining or increasing the tartness of the lemon/lime beverage. *See* paragraphs 30-33, setting forth Examples 1 and 2 (embodiments of the claimed invention), paragraphs 36-39 (Comparative Examples 1 and 2 (controls)), and paragraphs 40-42 (taste testing comparison between embodiments of the claimed invention and the controls).

As noted in paragraph 41 of the present application, when a panel of cola experts tasted the embodiment of Example 1 and control Comparative Example 1 immediately upon manufacture, i.e., fresh beverages, the experts adjudged the drinks Example 1 to be more tart. Seven months after manufacture, a panel of cola experts re-evaluated the cola drinks made according to Example 1 and Comparative Example 1, and unanimously found the flavors in the drinks of Comparative

Example 1 had decomposed significantly, rendering the drink quality unacceptable. On the contrary, the drinks according to Example 1 were judged as more tart and had acceptable flavor and taste.

As noted in paragraph 42 of the present application, a panel of lemon/lime flavored carbonated soft drink experts tasted 4-week old drinks made according to Example 2 and Comparative Example 2. The experts adjudged the drinks of Example 2 to be more tart and have a stronger lemon/lime taste.

In view of the foregoing, it is respectfully submitted that independent claims 23 and 24 are patentable over the prior art. For at least the same reasons that independent claims 23 and 24 are patentable, so are the dependent claims depending therefrom.

As noted in the Background of the present application, Lee U.S. Patent 5,348,756 relates to gelatin gels and powdered mixes therefore only. Lee does not remedy the deficiencies in Braun, Van Ness or Nakel. Lee does not teach a method for improving the stability of lemon/lime flavor of a lemon/lime flavored beverage, while also maintaining or increasing the tartness of the lemon/lime beverage. Thus, dependent claims 31 and 32 were not obvious and are patentable over the prior art.

Conclusion

In view of the foregoing, it is respectfully submitted that pending claims 23-40 are in condition for allowance. The Examiner is invited to contact the undersigned at the telephone number provided below, should it be deemed necessary to facilitate prosecution of the application.

Respectfully submitted,

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